



Asphalt Roofing Manufacturers Association

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June 25, 2003

Robert Pernell, Commissioner
Presiding Member
California Energy Commission
1516 Ninth Street, MS-35
Sacramento, CA 95814

Re: 2005 Building Energy Efficiency Standards – Standards for Residential and Non-Residential Buildings

Dear Commissioner:

The Roof Coatings Manufacturers Association (RCMA) is the national trade association representing the producers of bituminous (asphalt-based) and non-bituminous (acrylic and elastomeric) roof coatings and cements for use in a variety of roofing system applications. Our members ship a vast majority of the industry volume and employ over 2000 manufacturing workers. Many of our members have manufacturing facilities in the State of California or distribute product from neighboring states.

We have reviewed the California Energy Commissions' Draft Report relative to the 2005 Building Energy Efficiency Standards for Residential and Non Residential Buildings. RCMA is submitting this letter to request changes that would make the Draft Standard more efficient, less restrictive and less costly to the roofing industry and, thereby, more equitable. If these changes are not made, the consumer will ultimately bear the unnecessary cost for compliance related to the Standards requirements. Our specific comments are as follows:

1. In Section 10-113, we request that the Commission add Underwriters Laboratories, Inc. (UL) as a supervisory entity for purposes of administering a program and certifying reflectance and emittance of roofing products. UL is itself an independent third-party testing agency that is widely used in the roofing industry. UL has recently established a "cool roof" testing program for the roofing manufacturing industry. Since UL is a recognized national and regional authority in other code jurisdictions and the leading testing laboratory for the roofing industry, we respectfully request that they are recognized in the Standard. [We attach a May 2, 2003 letter from Underwriter's Laboratories as evidence of their program]
2. In Section 10-118 (i), and repeated in Section 10-143, the minimum initial solar reflectance of .70 is too high for a majority of the reflective coatings offered today. An initial solar reflectance of .65 is consistent with the EPA EnergyStar® program.

3. The physical properties of liquid applied roof coatings in Table 118-C are not indicative of the durability of roof coatings. Mandating these parameters will preclude the use of products that meet the reflectance and emittance values desired, and perform well for specific applications, but which cannot comply with these physical parameters. We believe that singling out liquid applied roof coatings with these performance requirements will add little benefit and will serve to disallow products that might otherwise meet both the goals of the Standard and the consumer.

RCMA appreciates the opportunity to comment on the Draft Standard and requests consideration of our input before it is voted on in July.

RCMA is available to expand on these comments at your convenience.

Best regards,

A handwritten signature in black ink, reading "Russell Snyder". The signature is written in a cursive, flowing style.

Russell K. Snyder
Executive Vice President



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Mr. Tom Shallow
Roof Coating Manufacturers Association
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May 2, 2003

Subject: Quotation and Outline of Investigation for Roof Covering Materials, Solar Reflectance/Emittance

Thank you for your interest in Underwriters Laboratories Inc., and giving us this opportunity to provide you with the following quotation for our services. In an attempt to provide a customized "cool roof" testing program, I have included a Classification option as well as a Data Development option for your consideration.

The Classification option provides the opportunity to put the UL Mark on your product and become listed in our Roofing Materials & Systems Product Directory. Having your product listed in a UL Product Directory instantly puts you in front of over 2500 code officials and Authorities Having Jurisdiction (AHJ). The UL Mark would be applied once the initial measurements have been taken. The data gathered in the Classification program can be applied to the various "cool roof" programs.

The Data Development option provides the opportunity to obtain measurement readings on your product. The data can be applied to the various "cool roof" programs. The Data Development program "does not" provide the opportunity to apply the UL Mark on your product.

UL offers a wide array of services in one convenient location. From fire to wind to impact resistance to solar reflectance/emittance, we cover the spectrum. UL provides the roofing industry with simplicity, convenience and over 100 years of experience. Furthermore, AHJ recognize the integrity of UL.

Please review the following attachments. Do not hesitate to contact me with any questions. I will follow-up with you in the near future.

Regards.

A handwritten signature in black ink, reading 'Kevin R. Faltin', is positioned above the typed name.

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An independent organization working for a safer world with integrity, precision and knowledge



Quotation

CLASSIFICATION OPTION

UL Prepares Sample

- \$4000 – UL preparation of the deck, construction of roof cover, initial solar reflectance (optional thermal emittance) measurements and three year weathering measurements
\$2000 – Each additional

Client Prepares Sample

- \$3000 – Client preparation of the deck, construction of roof cover, initial solar reflectance (optional thermal emittance) measurements and three year weathering measurements
\$1500 – Each additional

Bundled with UL Roofing Classification Test Program

- \$1500 – Each roof cover

The above pricing does not include travel expenses incurred by the local representative during the factory visit. This expense is billed at cost.

DATA DEVELOPMENT OPTION

UL Prepares Sample

- \$3000 – initial solar reflectance (optional thermal emittance) measurements and three year weathering measurements on deck material suggested by manufacturer
- \$1500 – Each additional

Client Prepares Sample

- \$1500 – initial solar reflectance (optional thermal emittance) measurements and three year weathering measurements on deck material suggested by manufacturer
- \$1000 – Each additional

Optional one year and/or two year intermediate measurements can be taken and reports provided for \$500 per product or system.

OUTLINE OF INVESTIGATION

TEST SPECIMENS

Deck

The test decks shall consist of two 2-ft by 2-ft sections constructed of nominal ½-in thick APA Rated Sheathing plywood attached to and supported at the entire perimeter by nominal 2-in by 4-in dimensional lumber pressure impregnated for resistance to weather (Wolmanized).

Roof Covering

For the Classification program, the roof covering product or system shall be constructed so as to represent the intended Solar Reflectance/Emittance Classification. The surface material shall be applied to, attached to or placed over a material layer representative of that immediately beneath the surface coating and/or membrane specified by the Classification. The roof covering is to be cured as recommended by the manufacturer or project sponsor prior to taking the initial solar reflectance (optional thermal emittance) measurements and beginning the weathering process. For the Data Development program, the manufacturer will indicate the desired roof covering.

TEST PROCEDURE

Solar Reflectance (Optional Thermal Emittance) Measurement

The solar reflectance (optional thermal emittance) of the roof sample will be measured initially and after weathering for three years. The laboratory technician shall employ a reflectometer such as the one produced by Devices and Services and shall follow the procedures outlined in Devices & Services Company Solar Spectrum Reflectometer, Version 5.0. The technician shall locate five points on each panel (at the ¼ points from each corner and at the center). Measurements shall be performed at each point. At least three repetitions shall be made of each measurement.

Weathering

The roof sample panels shall be mounted on support racks, facing south, at an incline of 2-inches per horizontal foot. Roof sample panels may be cleaned according to proper maintenance procedures as recommended by the manufacturer before solar reflectance (optional thermal emittance) tests are performed after a 3-yr period.

Weathering Farm Data

Report data on the weathering process will be recorded as follows:

- Start date of weathering exposure
- Removal date from weathering exposure
- Climatological data developed on a daily basis during exposure period
 - Ambient temperatures (high, low and average per month)
 - Relative humidity (high, low and average per month)
 - Rainfall (total per month)
 - Solar radiation (maximum, minimum and average per month)
 - UV energy (maximum, minimum and average per month)